APPENDIX A – APPEALED CLAIMS

36. An apparatus for resecting tissue within a body lumen, comprising:

an operating capsule including a coupling structure for selectively coupling to a flexible endoscope, the operating capsule being sized so that, when in an operative position entirely located within a body lumen adjacent to a selected portion of tissue to be resected structural integrity of lumenal tissue is maintained, the operating capsule including a suturing assembly and defining a cutting zone adjacent to the suturing assembly;

a flexible member extending proximally from the operating capsule to a control handle, wherein, when the operating capsule is in an operative position within a body lumen, the flexible member extends through the body and out a natural body orifice to the control handle; and

a tissue grabber grasping a full thickness fold of tissue including the selected portion of tissue and drawing the grasped fold of tissue into the cutting zone, wherein the suturing assembly fastens abutting portions of the grasped fold of tissue.

37. The apparatus of claim 36, further comprising a cutting element for cutting the selected portion of tissue from the abutting portions of the grasped fold tissue fastened together by the suturing assembly.

38. The apparatus of claim 36, wherein the suturing assembly includes an anvil and a stapling mechanism movably coupled to one another for movement between a closed position and a tissue receiving position.

39. The apparatus of claim 36, wherein the endoscope is slidably received within an endoscope receiving lumen formed in the operating capsule.

40. The apparatus of claim 36, further comprising:

a flexible sheath, a distal end of which is coupled to a proximal end of the operating capsule; and

a control handle coupled to a proximal end of the sheath wherein, when the operating capsule is in an operative position within a body lumen, the control handle remains outside the body lumen.

41. The apparatus of claim 36, further comprising a control handle which, when the operating capsule is in an operative position within a body lumen, remains outside the body, and a first flexible control element extending from the control handle through the sheath to the operating head.

42. The apparatus of claim 41, wherein the first control element is a cable extending between the control handle and the suturing assembly.

43. The apparatus of claim 38, wherein the anvil and the stapling mechanism are rotatably coupled to one another for movement between the closed and tissue receiving positions.

44. A system for resecting tissue from within a body lumen, comprising:

a flexible endoscope;

an operating head including a coupling structure for selectively coupling to the endoscope, the operating head including an anvil and a stapling mechanism moveable with respect to one another between a closed position in which the anvil and the stapling mechanism are adjacent to one another and a tissue receiving position in which the anvil is separated from the stapling mechanism, the operating head being sized so that, when in an operative position entirely located within a body lumen, structural integrity of lumenal tissue is maintained;

a flexible sheath extending from a proximal end of the operating head so that, when the operating head is in an operative position within a body lumen, a proximal end of the flexible sheath extends out of the body lumen;

a flexible grasping mechanism extending through the sheath for grasping a full thickness fold of tissue including a portion of tissue selected for resectioning and drawing the grasped fold of tissue into a space between the stapling mechanism and the anvil; and

a control handle coupled to the proximal end of the flexible sheath.

45. The system of claim 44, wherein the endoscope is slidably received through a lumen extending within the operating head.

46. The system of claim 44, further comprising a first flexible control member extending within the flexible sheath between the control handle and the stapling mechanism.

47. The system of claim 45, wherein the operating head further comprises a position adjusting mechanism for adjusting the position of the anvil relative to the stapling mechanism, the system further comprising a position adjusting flexible control member extending between the control handle and the position adjusting mechanism.

48. The system of claim 47, wherein the position adjusting mechanism moves the anvil and the stapling mechanism relative to one another between the tissue receiving position and a stapling position in which the anvil and the stapling mechanism are separated by a predetermined gap, wherein the predetermined gap is smaller than a separation between the anvil and the stapling mechanism when in the tissue receiving position.

49. A method for resecting tissue from within a body lumen, comprising the steps of:

a. inserting an operating head coupled to a flexible endoscope into a body lumen via a naturally occurring body orifice, wherein the operating head includes an anvil

and a stapling mechanism;

b. advancing the operating head over the endoscope within the body lumen to a desired position relative to a selected portion of tissue to be resected, wherein, when in the desired position, the entire operating head is received within the body lumen with the flexible endoscope bending to substantially conform to an unstressed configuration of the body lumen;

c. moving at least one of the anvil and the stapling mechanism relative to the other from a closed position in which the anvil and the stapling mechanism are adjacent to one another to a tissue receiving position in which the anvil is separated from the stapling mechanism;

d. grasping a full thickness fold of tissue including the selected portion of tissue and drawing the grasped fold of tissue into a tissue receiving chamber within the operating head;

e. moving at least one of the anvil and the stapling mechanism relative to the other from the tissue receiving position to a stapling position in which a surrounding portion of tissue adjacent to the selected portion of tissue is clamped between the anvil and the stapling mechanism;

f. stapling abutting portions of the grasped fold tissue; and

g. resecting the selected portion of tissue from the abutting portions of the grasped fold tissue.

50. The method according to claim 49, further comprising the steps of:

h. moving, after the selected portion of tissue has been resected, at least one of the anvil and the stapling mechanism relative to the other from the stapling position to release the surrounding portion of tissue therefrom; and

i. moving at least one of the anvil and the stapling mechanism relative to the other to the closed position to retain the selected portion of tissue therein.

51. The method according to claim 49, wherein, when the grasped fold of tissue including the selected portion of tissue is drawn into the tissue receiving chamber in step (d), the grasped fold of tissue is folded over so that two full thickness folded portions of the tissue are received between the anvil an the stapling mechanism.